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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,916	07/31/2002	Marc Long	S0441/270427	2386
30559	7590	04/22/2005	EXAMINER	
CHIEF PATENT COUNSEL SMITH & NEPHEW, INC. 1450 BROOKS ROAD MEMPHIS, TN 38116			OMGBA, ESSAMA	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,916

Applicant(s)

LONG ET AL.

Examiner

Essama Omgba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 70-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 70-73 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 11, 13 and 70-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keisling (WO 98/42460) in view of Titanium '95: Science and Technology (Titanium '95).

With regards to claims 1, 2, 11 and 13, Keisling discloses a process for producing an orthopedic component (see abstract), the process comprising casting a blank from a cobalt chrome alloy in a mold providing sufficient conductive heat transfer from the blank to rapidly cool the blank and produce a refined grain structure therein (page 4, lines 16-17 and page 7, lines 9-13 and the tables on pages 11 and 13), and subsequently forging the blank to produce the component (page 4, lines 16-17). Keisling does not disclose using a metal mold for the casting. However Titanium '95 teaches such a metal mold, see pages 692-695. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a metal mold in the process of Keisling, in light of the teachings of Titanium '95, in order to produce the articles more economically. Applicant should note that it is inherent that the microstructure of the product will be further refined as a result of the forging step.

For claim 3, see page 7, lines 20-22 and page 10, lines 4-6 of Keisling.

For claims 70-73, Applicant should note that the process of Keisling/Titanium '95 is capable of producing such grain size reduction.

3. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keisling/Titanium '95 as applied to claim 1 above, and further in view of (US Patent 5,498,302).

Keisling /Ruff et al. disclose a process for producing an orthopedic component as shown above. Although Keisling /Titanium '95 does not disclose using titanium or zirconium alloys or stainless steel for the cast blanks, however it is known to use titanium and zirconium alloys or stainless steel to cast medical implants as attested by Davidson, see column 1, lines 26-29, column 4, lines 64-67 and column 5, lines 1-5. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used titanium or zirconium alloys or stainless steel in casting the components of Keisling/Titanium '95, in light of the teachings of Davidson, as is known in the art.

4. Claims 7 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keisling/Titanium '95 as applied to claim 1 above, and further in view of High Temperature Metal Mold Casting (HTMMC).

Keisling/Titanium '95 discloses a process for producing a component as shown above except for using a gravity metal mold. However HTMMC teaches using a gravity metal mold in casting components, see whole document. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have

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cast the component of Keisling/Titanium '95 using a gravity metal mold, in light of the teachings of HTMMC, in order to simplify the manufacturing process.

5. Claims 8-10, 12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keisling/Titanium '95 as applied to claim 1 above, and further in view of Vacuum Diecasting (VC).

Keisling/Titanium '95 discloses a process for producing a component as shown above except for using a gravity metal mold. However VC teaches using a vacuum metal mold in casting components, see whole document. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have cast the component of Keisling/Titanium '95 using a vacuum metal mold, in light of the teachings of VC, in order to achieve a fast, simple manufacturing process. Applicant should note that VC process produces grain size in the 100 μm range. And that the ultimate tensile strength of components produced using vacuum diecasting is 10-12 percent higher than investment casting.

Response to Arguments

6. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

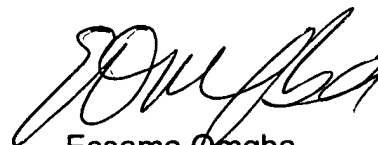
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Essama Omgba
Primary Examiner
Art Unit 3726

eo
April 16, 2005